

AMENDMENTS TO THE CLAIMS:

Claims 1-35 (Cancelled)

36. (Currently Amended) ~~An implant for insertion~~ A fixture for
an orthopaedic prosthesis, said fixture being arranged to be screwed
into a bore having an open end in a resected bone surface and
arranged to be permanently anchored ~~permanent anchorage~~ in bone
tissue, comprising an intraosseous anchoring structure of a generally
circular cross-section, said anchoring structure comprising a first
cylindrical section of a first diameter and a second cylindrical
section of a second diameter, said second diameter being less than
said first diameter, said first and second cylindrical sections each
being provided with a screw thread profile of the same hand,
characterized in that said anchoring structure comprises a tapered
connecting section provided between and interconnecting said first
and second cylindrical sections and in that said fixture comprises a
collar section which is arranged proximally to said first cylindrical
section of the anchoring structure adapted to abut said resected bone
surface.

37. (Cancelled)

38. (Currently Amended) [[An implant]] A fixture as claimed in claim 37, wherein the implant is a femur fixture of a hip-joint prosthesis.

39. (Currently Amended) [[An implant]] A fixture as claimed in claim 36, wherein said connecting section has a frusto-conical shape.

C 40. (Currently Amended) [[An implant]] A fixture as claimed in claim 39, wherein said connecting section at one end has a base diameter essentially equal to said first diameter of said first cylindrical section, and at the other end has a top diameter essentially equal to said second diameter of said second cylindrical section.

41. (Currently Amended) [[An implant]] A fixture as claimed in claim 39, wherein said connecting section has a flank angle in the range of 10°-50°.

42. (Currently Amended) [[An implant]] A fixture as claimed in claim 36, wherein said connecting section is at least partly provided with a roughened surface.

43. (Currently Amended) [[An implant]] A fixture as claimed in claim 42, wherein said roughened surface is at least partly a blasted surface.

44. (Currently Amended) [[An implant]] A fixture as claimed in claim 42, wherein said roughened surface is at least partly provided with a circumferentially oriented roughness.

C 45. (Currently Amended) [[An implant]] A fixture as claimed in claim 44, wherein said circumferentially oriented roughness is in the form of circumferential beads.

46. (Currently Amended) [[An implant]] A fixture as claimed in claim 45, wherein said circumferential beads has a height less than that of the screw thread profiles of said first and second cylindrical sections.

47. (Currently Amended) [[An implant]] A fixture as claimed in claim 46, wherein the height of said circumferential beads is no greater than 0.3 mm.

48. (Currently Amended) [[An implant]] A fixture as claimed in claim 44, wherein said circumferentially oriented roughness is in the shape of a screw thread profile.

49. (Currently Amended) [[An implant]] A fixture as claimed in claim 48, wherein the screw thread profile of said connecting section differs from the screw thread profiles of said first and second cylindrical sections.

50. (Currently Amended) [[An implant]] A fixture as claimed in claim 49, wherein the screw thread profile of said connecting section has a height less than that of the screw thread profile of said first and second cylindrical sections.

51. (Currently Amended) [[An implant]] A fixture as claimed in claim 50, wherein the screw thread profile of said connecting section is in the form of microthreads.

52. (Currently Amended) [[An implant]] A fixture as claimed in claim 51, wherein the height of said microthreads is no greater than 0.3 mm.

53. (Currently Amended) [[An implant]] A fixture as claimed in claim 48, wherein the heights of the screw thread profiles of said first and second cylindrical sections and said connecting section are essentially the same.

54. (Currently Amended) [[An implant]] A fixture as claimed in claim 36, wherein said connecting section is at least partly provided with a smooth surface.

55. (Currently Amended) [[An implant]] A fixture as claimed in claim 36, wherein the entire surface of said connecting section is smooth.

56. (Currently Amended) [[An implant]] A fixture as claimed in claim 36, wherein one or more self-tapping cutting recesses are provided at least in part on said connecting section.

57. (Currently Amended) [[An implant]] A fixture as claimed in claim 36, wherein said implant comprises a head section, and wherein said anchoring structure comprises a tapered proximal section being provided between and interconnecting said first cylindrical section and said head section.

58. (Currently Amended) [[An implant]] A fixture as claimed in claim 57, wherein said proximal section has a frustro-conical shape.

59. (Currently Amended) [[An implant]] A fixture as claimed in claim 58, wherein said proximal section at the end interfacing said first cylindrical section has a diameter essentially equal to said first diameter of said first cylindrical section.

C 60. (Currently Amended) [[An implant]] A fixture as claimed in claim 58, wherein said proximal section has a flank angle in the range of 8° - 15° .

61. (Currently Amended) [[An implant]] A fixture as claimed in claim 57, wherein said proximal section is at least partly provided with a circumferentially oriented roughness.

62. (Currently Amended) [[An implant]] A fixture as claimed in claim 61, wherein said circumferentially oriented roughness is in the form of circumferential beads.

63. (Currently Amended) [[An implant]] A fixture as claimed in claim 61, wherein said circumferentially oriented roughness is in the form of a screw thread profile.

64. (Currently Amended) [[An implant]] A fixture as claimed in claim 62, wherein the height of said circumferentially oriented roughness is no greater than 0.3mm.

C 65. (Currently Amended) [[An implant]] A fixture as claimed in claim 57, wherein said ~~head section comprises a collar section~~ forms part of the head section ~~having a distal surface abutting said anchoring surface.~~

66. (Currently Amended) [[An implant]] A fixture as claimed in claim 65, wherein said distal surface is inclined inwardly towards the body of the collar section.

67. (Currently Amended) [[An implant]] A fixture as claimed in claim 66, wherein said distal surface is inclined inwardly at an inclination angle within the range of 10°-20°.

68. (Currently Amended) [[An implant]] A fixture as claimed in claim 65, wherein said distal surface is concave.

69. (Currently Amended) [[An implant]] A fixture as claimed in claim 65, wherein said distal surface is provided with radially spaced circular beads.

70. (Currently Amended) [[An implant]] A fixture as claimed in claim 69, wherein said circular beads have a height in the range of 0.1-0.5mm.